The following listing of claims will replace all prior versions, and listings, of clams in this application.

Listing of the Claims:

Claims 1-15 (Previously Cancelled).

Claim ~~16~~ 1 (Currently Amended). ~~A~~ An isolated peptide, which ~~has~~ consists of the amino acid sequence of SEQ ID NO.: 6 or a ~~homologous~~ sequence that is 75 % identical thereto ~~thereof~~ and which exhibits IL-2R β-chain binding activity and/or lymphocyte stimulatory activity.

Claim 17 (Previously Cancelled).

Claim ~~18~~ 2 (Currently Amended). The peptide of Claim ~~16~~ 1, which ~~has the~~ consists of the amino acid sequence of SEQ ID NO.: 6.

Claim ~~19~~ 3 (Currently Amended). The peptide of Claim ~~16~~ 1, which is a ~~homologous~~ sequence ~~of~~ that is 75 % identical to SEQ ID NO.: 6 with a conservative change of non-polar R-groups by other non-polar R groups in amino acids thereof, and which exhibits IL-2R β-chain binding activity and/or lymphocyte stimulatory activity.

Claim ~~20~~ 4 (Currently Amended). The peptide of Claim ~~16~~ 1, which is a ~~homologous~~ sequence ~~of~~ that is 75% identical to SEQ ID NO:6 with a conservative change of uncharged polar R groups by other uncharged polar R groups in amino acids thereof, and which exhibits IL-2R β-chain binding activity and/or lymphocyte stimulatory activity.

Claim 21 (Currently Amended). The peptide of Claim 16; which is a ~~homologous~~ sequence ~~of~~ that is 75% identical to SEQ ID NO:6 with a conservative change of charged polar R groups by other charged polar R groups in amino acids thereof, and which exhibits IL-2R β-chain binding activity and/or lymphocyte stimulatory activity.

Claim 22 (Currently Amended). The peptide of Claim 16, which is a ~~homologous~~ sequence ~~of~~ that is 75% identical to SEQ ID NO.: 6, wherein Lys is substituted for Arg, or Arg is substituted for Lys so that a positive charge is maintained and which exhibits IL-2R β-chain binding activity and/or lymphocyte stimulatory activity.

C1

Claim 23 (Currently Amended). The peptide of Claim 16, which is a ~~homologous~~ sequence ~~of~~ that is 75% identical to SEQ ID NO.: 6, wherein Glu is substituted for Asp, or Asp is substituted for Glu so that a negative charge is maintained and which exhibits IL-2R β-chain binding activity and/or lymphocyte stimulatory activity.

Claim 24 (Currently Amended). The peptide of Claim 16, which is a ~~homologous~~ sequence ~~of~~ that is 75% identical to SEQ ID NO.: 6, wherein Ser is substituted for Thr, such that a free-OH group is maintained and which exhibits IL-2R β-chain binding activity and/or lymphocyte stimulatory activity.

Claim 25 (Currently Amended). The peptide of Claim 16, which is a ~~homologous~~ sequence ~~of~~ that is 75% identical to SEQ ID NO.: 6, wherein Gln is substituted for Asn such that a free-NH2 group is maintained and which exhibits IL-2R β-chain binding activity and/or lymphocyte stimulatory activity.

Claim 26 (Currently Amended). The peptide of Claim 16, which is a ~~homologous~~ sequence ~~of~~ that is 75% identical to SEQ ID NO.:6 and exhibits lymphocyte stimulatory activity, wherein said lymphocyte stimulatory activity comprises induction of SHC phosphorylation; or induction of the SHC/MAPK pathway.

Claim 27 (Currently Amended). The peptide of Claim 16, which ~~has~~ consists of the sequence of SEQ ID NO:8.

Claim 28 (Previously added). A composition comprising the peptide of Claim 16 and a carrier.

C1

Claim 29 (Previously added). The composition of Claim 28, which further comprises one or more cytokines.

Claim 30 (Previously added). The composition of Claim 29, wherein said one or more cytokines are selected from the group consisting of IL-2, IL-4, IL-9, IL-7 or IL-15.

Claim 31 (Previously added). A method of detecting the presence of IL-2R in a mammalian biological sample, comprising

contacting the mammalian biological sample with the peptide of Claim 16 under conditions suitable to allow binding of IL-2R and the peptide;

detecting the presence or absence of binding, wherein the presence of binding indicates the presence of the IL-2R in the mammalian biological sample.

Claim 32 (Previously added). The method of Claim 31, wherein the peptide further comprises a detectable label.

Claims 33-37 (Cancelled).

Claim 38 (Previously added). The peptide of Claim 16, which further comprises a detectable label.

Claim 39 (Previously added). A composition comprising the peptide of Claim 38 and a carrier.

C1

Claim 40 (Previously added). A kit comprising the peptide of Claim 16 and reagents for labeling the peptide and detecting the labeled peptide.

Claim 41 (Previously added). A kit comprising the peptide of Claim 38 and reagents for detecting the label.